

Amendment
U.S. Patent Application No. 10/701,075

Amendments to the Specification:

Please replace the paragraph beginning on page 11, line 28 and ending on page 12, line 5 with the following amended paragraph:

The gas permeability of solid walls of different materials may vary by as much as eight orders of magnitude. Glass, ceramics and most metals could be considered impermeable in all practical aspects discussed here. Such materials may therefore be used for designing an absolute reference channel, according to the discussion above. Polymer or elastomer membranes which are more or less permeable to gases may be used as filter elements for the measuring channel and a floating reference. Between different materials and filter dimensions, it is possible to predetermine the permeability and thus set it to the desired response time, in the case of the measuring channel, or the averaging time constant, in the case of the floating reference ~~channel~~ channel. More elaborately, by using micro-valves to close or open certain paths for gas permeation, the corresponding permeabilities and time constants could be controlled in real time.